CALIBRATION STANDARD REQUIREMENT

FOR A

CALIBRATION FIXTURE

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PROCUREMENT PACKAGE

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CALIBRATION STANDARD REQUIREMENT FOR A CALIBRATION FIXTURE

1. SCOPE

1.1 Scope. This requirement defines the mechanical, electrical, and electronic characteristics for a Calibration Fixture. This equipment is intended to be used by Navy personnel in shipboard and shorebased laborator in calibration support of various microwave equipment . For the purpose this requirement, the Calibration Fixture shall be referred to as the CF.

2. APPLICABLE DOCUMENTS

2.1 Controlling Specifications. MIL-T-28800, "Military requirement, Test Equipment for use with Electrical and Electronic Equipment, Genera specification for," and all documents referenced therein of the issues effect on the date of this solicitation shall form a part of this requireme

3. REQUIREMENTS

3.1 General. The CF shall conform to the Type II, Class 5, Style E requirements as specified in MIL-T-28800 for Navy shipboard and shorebased as modified below. The use of material restricted for Navy use shall governed by MIL-T-28800.

3.1.1 Design and Construction. The CF design and construction shall meet the requirements of MIL-T-28800 for Type II equipment.

3.1.2 Power requirements. No electrical line power is required.

3.1.3 Dimension and Weight. Maximum dimensions shall not exceed 4 inches (10 cm) in width, 4 inches (10 cm) in height, and 4 inches (10 cm) in depth. weight shall not exceed .4 pounds (.2 kg).

3.2 Environmental Requirements. The CF shall meet the environmental requirements for a Type II, Class 5, Style E equipment with the deviatic specified below.

3.2.1 Temperature and Humidity. The CF shall meet the conditions below:

	Temperature((C)	Relative Humidity(%)
Operating	10 to 30	95
	30 to 40	75
Non-operating	-40 to 70	Not controlled

3.2.2 Electromagnetic Compatibility. The electromagnetic compatibility requirements of MIL-T-28800 are limited to the following areas: CE01, CE0 CS01, CS02, CS06, RE01, RE02 (14 kHz to 1 GHz), and RS03.

3.3 Reliability. Type II reliability requirements are as specified in MIL-T-28800.

3.3.1 Calibration Interval. The CF shall have an 85% or greater probability of remaining within tolerances of all requirements at the end of a 12 mon period.

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8.5 Ghz.

3.5.2 Impedance. The impedance shall be 50 ohms.

3.5.3 VSWR. The VSWR shall be a maximum of 1.05 + .015 f GHz from DC to 1 Ghz and a maximum of 1.015 + .005 f GHz to 8.5 GHz.

3.5.4 Input Voltage. The CA shall meet all requirements with applied minimum voltage of 500 volts peak.

3.5.5 Power. The CA shall meet all requirements with applied minimum average power levels of 3 kW from DC to 1 Mhz, decreasing as 1/(f at higher frequencies (f).

3.6 Operating Requirements. The Scope shall provide the following operating capabilities.

3.6.1 Front Panel Control Requirements. All modes and functions shall be operable using front panel controls. The locations and labeling of indicators, controls, and switches shall provide for maximum clarity and easily understood operation without reference to tables, charts, or flow diagrams.

3.6.2 Programmability. All modes and functions shall be fully remotely programmable via the IEEE-488.1 instrumentation bus. When operating the Scope via remote programming, all front panel controls shall be disabled, except for the on / off switch and the Remote / Local switch.

3.6.3 Error Correction. During calibration, the Scope shall provide the capability to accept and store corrections for all measurement deviations from nominal conditions. This correction capability shall be operational from the front panel control and over the IEEE-488 bus. When the Scope is operated within its calibration period, it shall meet all the specified performance specifications without requiring the additional entry of any calibration factor or other correction data by the operator, including correction data entered by an instrument controller.

3.6.4 Local / Remote. The Scope shall have a local and remote operation mode. It shall be either manually or remotely programmable selectable according to paragraph 3.6.2. Manual selection shall be provided by a front panel switch. A means of indicating the operational mode shall be provided. When changing modes, all parameter values shall remain unchanged.

3.6.5 Self-Test. The self-test shall comprise two selectable levels, an operational test to determine if the instrument is operationally ready, and second level diagnostic test to diagnose and isolate faulty field replaceable modules. When the self-test function is initiated, an auto-sequenced internal operational test shall be performed. The diagnostic test shall be selectable only by deliberate operator command.

3.6.6 IEEE Interface. The Scope shall have an IEEE-488.1 interface connector with the following capabilities: SH1, AH1, T6, L4, SR1, RL1, DT1. Serial poll capability shall be provided.

3.6.7 Compatibility. The Scope shall be tested for compatibility with the IEEE-488 bus and the John Fluke model 1722A/AP instrument controller.

3.6 Manual. At least two copies of an operation and maintenance manual shall be provided. The manual shall meet the requirements of MIL-M-7298.

3.6.1 Calibration Procedure. The manual shall include a calibration procedure accordance with MIL-M-38793.